

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT
OR THE DECLARATION

(PCT Rule 44.1)

To:

INTERNATIONAAL OCTROOIBUREAU B.V.
Attn. Charpail, Francois
Prof. Holstlaan 6
NL-5656 AA Eindhoven
NETHERLANDS

THOM

13 SEP 2002

Date of mailing
(day/month/year)

24/09/2002

Applicant's or agent's file reference

PHUS010394W0

FOR FURTHER ACTION

See paragraphs 1 and 4 below

International application No.

PCT/IB 02/02674

International filing date
(day/month/year)

26/06/2002

Applicant

KONINKLIJKE PHILIPS ELECTRONICS N.V.

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.


4. **Further action(s):** The applicant is reminded of the following:

Shortly after **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

Within **19 months** from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within **20 months** from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority

 European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
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Authorized officer

Silke Schmeth}sen

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PHUS010394W0	FOR FURTHER ACTION <small>see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</small>	
International application No. PCT/IB 02/ 02674	International filing date (day/month/year) 26/06/2002	(Earliest) Priority Date (day/month/year) 27/06/2001
Applicant KONINKLIJKE PHILIPS ELECTRONICS N.V.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 05 sheets.
☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).
3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the title,

- ☐ the text is approved as submitted by the applicant.
- ☒ the text has been established by this Authority to read as follows:

ULTRASOUND TRANSDUCER

5. With regard to the abstract,

- ☐ the text is approved as submitted by the applicant.
- ☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

- ☐ as suggested by the applicant.
- ☒ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.

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☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 02/02674

Box III TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)

An acoustic imaging system is described. A preferred system includes a protective cover configured to mate with a transducer body. The transducer includes a two-dimensional transducer element matrix array formed by a plurality of individually controllable transducer elements. The protective cover is superposed above the two-dimensional matrix array and is transparent to incident acoustic energy. Preferably, the protective cover is shaped to reduce patient discomfort and repetitive motion injuries to sonographers. Alternative embodiments comprise a shaped two-dimensional transducer element matrix array. Methods for improved ultrasound imaging are also provided.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB 02/02674

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01S15/06 G01S15/89 A61B8/00 G01S7/52

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61B G01S G10K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 139 496 A (ATLAS MICHAEL ET AL) 31 October 2000 (2000-10-31)	1-4, 6-15, 18-22 5,16,17
Y	abstract; figures 1-6 column 1, line 13 -column 2, line 1 column 3, line 12-16,44-46 column 4, line 12-16 column 6, line 61 -column 7, line 14 column 7, line 46 -column 12, line 40 --- -/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

16 September 2002

Date of mailing of the international search report

24/09/2002

Name and mailing address of the ISA

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Authorized officer

Reuss, T

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 02/02674

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 713 102 A (ADVANCED TECH LAB) 22 May 1996 (1996-05-22)	1-4,8-22
Y	figures 1-7 column 2, line 34 -column 3, line 7 column 3, line 40-42 column 4, line 22-31 column 7, line 29 -column 8, line 3	5-7
X	US 5 293 351 A (NOPONEN SEPPÖ) 8 March 1994 (1994-03-08) page 1; figures 1,2 column 2, line 25 -column 3, line 12 column 5, line 60 -column 6, line 11	1,3
X	US 5 820 564 A (CHO YOUNG-HWAN ET AL) 13 October 1998 (1998-10-13) figures 1,2,7 column 1, line 40-54 column 2, line 53 -column 3, line 27 column 4, line 4-7,57-62	1,2,5
X	US 5 483 963 A (BUTLER NEAL R ET AL) 16 January 1996 (1996-01-16) figures 1,2 column 1, line 4-8 column 4, line 66 -column 5, line 65 column 8, line 53-63	1,2
Y	DE 32 19 229 A (SIEMENS AG) 24 November 1983 (1983-11-24) page 3, line 22-25	16,17
Y	US 4 641 660 A (BELE ROBERT) 10 February 1987 (1987-02-10) figures 1,2 column 3, line 37-45	6,7

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 02/02674

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6139496	A	31-10-2000	NONE	
EP 0713102	A	22-05-1996	US 5517994 A EP 0713102 A1 JP 8238243 A	21-05-1996 22-05-1996 17-09-1996
US 5293351	A	08-03-1994	FI 901724 A AU 7570791 A CA 2079595 A1 DE 69103142 D1 DE 69103142 T2 EP 0523096 A1 WO 9115781 A1 JP 7500661 T	06-10-1991 30-10-1991 06-10-1991 01-09-1994 03-11-1994 20-01-1993 17-10-1991 19-01-1995
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US 4641660	A	10-02-1987	FR 2553521 A1 AT 34863 T DE 3471785 D1 EP 0150634 A1 JP 60150734 A	19-04-1985 15-06-1988 07-07-1988 07-08-1985 08-08-1985